

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1-10. (Canceled).

11. (Previously presented) A resin molded type semiconductor device comprising: a semiconductor chip which is mounted on a die pad of a lead frame; thin metal wires which electrically connect terminals of an upper face of said semiconductor chip to inner lead portions of said lead frame; a sealing resin which seals an outer peripheral region of said semiconductor chip, said region including a thin metal wire region of the upper face of said semiconductor chip; and outer lead portions which are arranged in a bottom face region of said sealing resin and which are formed to be continuous to respective inner lead portions, wherein at least one groove portion is formed in a surface of each of said inner lead portions, a connecting portion of each of said thin metal wires is coupled to a respective inner lead portion at a flat surface region of said respective inner lead portion adjacent said at least one groove portion.

12. (Previously presented) A resin molded type semiconductor device according to claim 11, wherein exposed faces of said outer lead portion are arranged in a same level as an

outer face of said sealing resin.

13. (Canceled).

14. (Previously Presented) A resin molded type semiconductor device comprising:

a die pad; and

leads including inner lead portions and outer lead portions, each of said inner lead portions including at least one groove portion which is formed in a surface thereof;

a semiconductor chip mounted over said die pad;

thin metal wires which electrically connect terminals of said semiconductor chip to said inner lead portions at a position not on said groove portion; and

a sealing resin which seals said groove portion, an outer peripheral region of said semiconductor chip, an entire upper region of said inner lead portions and parts of said inner lead portions where said thin metal wires are electrically connected, said outer peripheral region including a region of said thin metal wires,

wherein said sealing resin leaves an entire bottom surface of said inner lead portions unsealed.

15. (Previously presented) The resin molded type semiconductor device according to claim 14, wherein each of said inner lead portions includes said at least one groove portion which is formed in an upper surface of said inner lead portions.

16. (Previously presented) The resin molded type semiconductor device according to claim 15, wherein said die pad is disposed higher than said upper surface of said inner lead portions, and said sealing resin seals a lower region of said die pad.

17. (Previously presented) The resin molded type semiconductor device according to claim 16, wherein a bottom surface of said die pad is disposed higher than a bottom surface of said inner lead portions.

18. (Previously presented) The resin molded type semiconductor device according to claim 17, wherein at least a portion of said outer periphery of said semiconductor chip extends outward from said outer periphery of said die pad.

19. (Previously presented) The resin molded type semiconductor device according to claim 18, wherein said groove

portion absorbs stress at a connection between said thin metal wires and said inner lead portions.

20. (Previously presented) A resin molded type semiconductor device according to claim 19, wherein a total thickness is not greater than a sum of a thickness of said semiconductor chip and 1 mm.

21. (Previously presented) The resin molded type semiconductor device according to claim 19, wherein exposed faces of said outer lead portions are substantially arranged in a same plane as an outer surface of said sealing resin.

22. (Previously presented) A resin molded type semiconductor device comprising:

a die pad; and

leads each including at least one groove portion which is formed in a surface thereof;

a semiconductor chip mounted over said die pad;

thin metal wires which electrically connect terminals of said semiconductor chip to said leads at a position not on said groove portion; and

a sealing resin which seals said groove portion, said thin

metal wires, said semiconductor chip, an upper region of said leads and parts of said leads where said thin metal wires are electrically connected,

wherein said sealing resin leaves an entire bottom surface of said leads unsealed.

23. (Previously presented) The resin molded type semiconductor device according to claim 22, wherein each of said leads includes said at least one groove portion which is formed in an upper surface of said leads.

24. (Previously presented) The resin molded type semiconductor device according to claim 23, wherein said die pad is disposed higher than said upper surface of said leads.

25. (Previously presented) The resin molded type semiconductor device according to claim 24, wherein a bottom surface of said die pad is disposed higher than a bottom surface of said leads.

26. (Previously presented) The resin molded type semiconductor device according to claim 25, wherein at least a portion of said outer periphery of said semiconductor chip

extends outward from said outer periphery of said die pad.

27. (Previously presented) The resin molded type semiconductor device according to claim 26, wherein said groove portion absorbs stress at a connection between said thin metal wires and said leads.

28. (Previously presented) A resin molded type semiconductor device according to claim 27, wherein a total thickness is not greater than a sum of a thickness of said semiconductor chip and 1 mm.

29. (Previously presented) The resin molded type semiconductor device according to claim 19, wherein exposed faces of said leads are substantially arranged in a same plane as an outer surface of said sealing resin.

30. (Previously presented) A resin molded type semiconductor device comprising:

a die pad;

leads including inner lead portions and outer lead portions, each of said inner lead portions including at least one groove portion which is formed in a surface thereof;

a semiconductor chip mounted over said die pad;

thin metal wires which electrically connect terminals of said semiconductor chip to said inner lead portions at a position not on said groove portion; and

a sealing resin which seals said groove portion, an outer peripheral region of said semiconductor chip, the entire top surface of said inner lead portions and parts of said inner lead portions where said thin metal wires are electrically connected, said outer peripheral region including a region of said thin metal wires,

wherein said sealing resin leaves unsealed at least the bottom surface of a part of said inner lead portions where said groove portion is formed.

31. (Previously Presented) The resin molded type semiconductor device according to claim 30, wherein each of said inner lead portions includes said at least one groove portion which is formed in an upper surface of said inner lead portions.

32. (Previously Presented) The resin molded type semiconductor device according to claim 31, wherein said die pad is disposed higher than said upper surface of said inner lead portions, and said sealing resin seals a lower region of said die

pad.

33. (Previously Presented) The resin molded type semiconductor device according to claim 32, wherein a bottom surface of said die pad is disposed higher than a bottom surface of said inner lead portions.

34. (Previously Presented) The resin molded type semiconductor device according to claim 33, wherein at least a portion of said outer periphery of said semiconductor chip extends outward from said outer periphery of said die pad.

35. (Previously Presented) The resin molded type semiconductor device according to claim 34, wherein said groove portion absorbs stress at a connection between said thin metal wires and said inner lead portions.

36. (Previously Presented) A resin molded type semiconductor device according to claim 35, wherein a total thickness is not greater than a sum of a thickness of said semiconductor chip and 1 mm.

37. (Previously Presented) The resin molded type



semiconductor device according to claim 35, wherein exposed faces of said outer lead portions are substantially arranged in a same plane as an outer surface of said sealing resin.

38. (Previously Presented) A resin molded type semiconductor device comprising:

a die pad;

leads each including at least one groove portion which is formed in a surface thereof;

a semiconductor chip mounted over said die pad;

thin metal wires which electrically connect terminals of said semiconductor chip to said leads at a position not on said groove portion; and

a sealing resin which seals said groove portion, said thin metal wires, said semiconductor chip, a top surface of said leads and parts of said leads where said thin metal wires are electrically connected,

wherein said sealing resin leaves unsealed at least the bottom surface of a part of said leads where said groove portion is formed.

39. (Previously Presented) The resin molded type semiconductor device according to claim 38, wherein each of said

leads includes said at least one groove portion which is formed in an upper surface of said leads.

40. (Previously Presented) The resin molded type semiconductor device according to claim 39, wherein said die pad is disposed higher than said upper surface of said leads.

41. (Previously Presented) The resin molded type semiconductor device according to claim 40, wherein a bottom surface of said die pad is disposed higher than a bottom surface of said leads.

42. (Previously Presented) The resin molded type semiconductor device according to claim 41, wherein at least a portion of said outer periphery of said semiconductor chip extends outward from said outer periphery of said die pad.

43. (Previously Presented) The resin molded type semiconductor device according to claim 42, wherein said groove portion absorbs stress at a connection between said thin metal wires and said leads.

44. (Previously Presented) A resin molded type semiconductor device according to claim 43, wherein a total thickness is not greater than a sum of a thickness of said

semiconductor chip and 1 mm.

45. (Previously Presented) The resin molded type semiconductor device according to claim 43, wherein exposed faces of said leads are substantially arranged in a same plane as an outer surface of said sealing resin.